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10/509,187	05/24/2005	Pertti Aimonen	121036	7346
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ROBERTS, JESSICA M				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/509,187

Applicant(s)

AIMONEN ET AL.

Examiner

JESSICA ROBERTS

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09/27/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 9-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 09/11/2007..12/27/2004
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Status of Claims***

Claims 1-8 have been cancelled. Claims 9-16 are currently pending in Application No. 10/509,187.

1. The abstract of the disclosure is objected to because of undue length. Correction is required. See MPEP § 608.01(b).

### ***Drawings***

2. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Regarding claims 9-10 and 16 the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

4. Regarding claim 16, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).
5. Regarding claim 14, the phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
8. Claims 9-10, 12-13 and 15-16 rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art in view of Tullis et al., US-6,118,132 and further in view of Eisen et al., US-4,949,191.

Regarding claim 9, AAPA teaches A method for synchronizing information of different stages of a process produced by optical imaging measuring devices which monitor the manufacturing and/or finishing process of a fibre web, in relation to the movement of the fibre web in the machine direction for monitoring the quality and/or condition of said process, which method comprises the steps of monitoring the moving fibre web and/or a moving means involved in the processing of the fibre web by means of imaging measuring devices placed in successive measuring positions in the machine direction ([0003] and fig. 1), recording the information acquired from said imaging measuring devices in different measuring positions ([0003]), searching the information recorded by imaging in the different measuring positions, for images, or the like, relating to the same local area of the fibre web ([0005]) and analyzing said images, or the like, relating to the same local area of the fibre web in different measuring positions ([0006]), for monitoring the quality and/or condition of said process ([0004]), wherein the method also comprises the steps of searching the images, or the like, recorded in the different measuring positions (AAPA discloses For example, if a break caused by an edge defect or a hole in the web is detected in the reel-up of the paper machine (camera unit N in FIG. 1), one must first determine if a web defect causing the break is already visible in an earlier step in the manufacturing process, that is, for example in images stored by camera units N-1, N-2. To determine this, the user of the monitoring system must find, from the video recordings of the camera units preceding the reel-up, the corresponding web section where the web defect that caused the break can be observed for the first time, [0006] ) , and determining travel time delays of the fibre web between the different

measuring positions on the basis of time data included in the recording of images, or the like ([0008], [0010]), in the different measuring positions for synchronizing, with each other in time, said images or the like ([0011]), recorded in different measuring positions with the movement of the fibre web in the machine direction ([0008]). AAPA does not explicitly disclose digital pattern recognition, for a feature/features relating to the same local area of the fibre web, time data included in said feature/features upon the recording of images.

However, Tullis teaches digital pattern recognition, for a feature/features relating to the same local area of the fibre web (as will further be appreciated by persons skilled in the art, the pattern detected on the web of material 14 may be a created pattern that is inherent to in the material itself, such as fiber or structural patterns within the material of the web, column 6 line 5-10), time data included in said feature/features upon the recording of images (column 5 line 22-33).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Tullis with AAPA for providing an apparatus and method that effectively measures the velocity, displacement and/or strain on a moving web of material (or just strain of a generally stationary web of material), and that can measure large displacement of approximate length "d" without otherwise incurring errors from accumulating smaller displacement increments, column 2 line 57-64.

AAPA (modified by Tullis) as a whole is silent in regards to automatically synchronizing.

However Eisen teaches to automatically synchronize (column 1 line 52-57).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Eisen with AAPA (modified by Tullis) for providing an improved system for imaging a surface of a rapidly moving workpiece, column 1 line 49-51.

Regarding claim 10, AAPA (modified by Tullis and Eisen) as a whole teaches everything as claimed above, see claim 1. In addition, AAPA teaches the method according to claim 9, wherein the information recorded by imaging in each measuring position (fig. 1), the search is limited to a given sequence comprising successive images or the like ([0009]), which sequence is defined by means of approximate synchronization based on the distance between the measuring positions and the speed data of the fibre web ([0010]).

Regarding claim 12, AAPA (modified by Tullis and Eisen) as a whole teaches everything as claimed above, see claim 9. In addition, AAPA teaches the method according to claim 9, wherein the information recorded by imaging (fig. 1). AAPA is silent in regards to processed by methods of digital image processing to emphasize the feature/features (column 6 line 28-32) to be searched in the fibre web and/or a moving means (column 6 line 5-7) involved in the processing of the fibre web, to facilitate pattern recognition (column 8 line 5-10, and fig.5 element 56 & 57, fig. 9 and 10). However, Tullis teaches to emphasize the feature/features (column 6 line 28-32) to be searched in the fibre web and/or a moving means (column 6 line 5-7) involved in the

processing of the fibre web, to facilitate pattern recognition (column 8 line 5-10, and fig.5 element 56 & 57, fig. 9 and 10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Tullis with AAPA (modified by Eisen) for providing an apparatus and method that effectively measures the velocity, displacement and/or strain on a moving web of material (or just strain of a generally stationary web of material), and that can measure large displacement of approximate length "d" without otherwise incurring errors from accumulating smaller displacement increments, column 2 line 57-64.

Regarding claim 13, AAPA (modified by Tullis and Eisen) as a whole teaches everything as claimed above, see claim 9. In addition, AAPA teaches the method according to claim 9, wherein the information recorded by imaging is produced with cameras (fig. 1 elements 1-N), preferably cameras of the visible wavelength range or thermal cameras operating in the infrared range ([0005]).

Regarding claim 15, AAPA (modified by Tullis and Eisen) teaches everything as claimed above, see claim 9. IN addition, AAPA teaches the method according to claim 9, wherein the information recorded by imaging is produced substantially over the whole production width of the fibre web or on only a part of the production width of the fibre web ([0005] and fig. 1)

Regarding claim 16, AAPA (modified by Tullis and Eisen) as a whole teaches everything as claimed above, see claim 9. The method according to claim 9, wherein the feature to be found in the information recorded by imaging is a local edge defect, a



hole, a tear, a coating defect in the fibre web and/or a moving means involved in the processing of the fibre web, such as a wire, a felt, a roll, a reel, or the like; a tail of the fibre web passing through the manufacturing and/or finishing apparatus in connection with an event of break in the fibre web; or a locally discernible phenomenon caused by the user by marking in the fibre web or in a moving means involved in its processing (AAPA discloses video sequences corresponding to the same point of the moving fibre web but recorded in different camera positions 1 to N at different times can be used to find out which step in the process is the origin of the cause for a defect. For example, if a break caused by an edge defect or a hole in the web is detected in the reel-up of the paper machine (camera unit N in FIG. 1), one must first determine if a web defect causing the break is already visible in an earlier step in the manufacturing process, that is, for example in images stored by camera units N-1, N-2, [0006], which reads upon the limitations as claimed or the like).

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art in view of Tullis et al., US-6,118,132 in view of Eisen et al., US-4,949,191 and further in view of Lindt et al., US-6,188,077.

Regarding claim 11, AAPA (modified by Tullis and Eisen) as a whole teaches everything as claimed above, see claim 9. In addition, AAPA teaches the method according to claim 9, wherein in the information recorded by imaging in each measuring position (fig.1). AAPA (modified by Tullis and Eisen) is silent in regards to the search is

limited to a given area narrower than the production width of the fibre web in the transverse direction.

However, Lind teaches the search is limited to a given area narrower than the production width of the fibre web (column 3 line 54-64).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Lind with AAPA (modified by Tullis and Eisen) for providing improved measuring of moving webs.

10. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art in view of Tullis et al., US-6,118,132 in view of Eisen et al., US-4,949,191 and further in view of Workman et al., WO/200148462 A1.

Regarding claim 14, AAPA (modified by Tullis and Eisen) as a whole teaches everything as claimed above, see claim 9. AAPA is silent in regards to the method according to claim 9, wherein the information recorded by imaging is produced with imaging measuring devices based on spectral resolution, for example imaging spectrometers.

However, Workman teaches spectrometers (In accordance with the present invention, it has been found that composition information regarding a moving web product can be accurately derived using specially-adapted spectrometric monitoring equipment, pg 6 line 10-14.).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teachings of Workman with AAPA (modified by

Tullis) to provide reliable information regarding the composition of a moving web on a real-time basis, column 2 line 6-9.

***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
12. Rudt et al., US-5,821,990 A

***Examiner's Note***

13. The referenced citations made in the rejection(s) above are intended to exemplify areas in the prior art document(s) in which the examiner believed are the most relevant to the claimed subject matter. However, it is incumbent upon the applicant to analyze the prior art document(s) in its/their entirety since other areas of the document(s) may be relied upon at a later time to substantiate examiner's rationale of record. A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). However, "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed...." In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSICA ROBERTS whose telephone number is

(571)270-1821. The examiner can normally be reached on 7:30-5:00 EST Monday-Friday, Alt Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha D. Banks-Harold/  
Supervisory Patent Examiner, Art Unit 2621

/Jessica Roberts/  
Examiner, Art Unit 2621